

# Work Order ID 78544

**\*78544\***

Page 1

January 11-12 10:53:05 AM

Item ID: D412-666-011

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Gross Weight Towing

Stop

**\*NS2\***

Start Date: 11/01/2012 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 25/01/2012 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/01/11

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

IIN D412-666

Rev C1

100

0.00

**\*100\***

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP412-666-011

CHG 004

110

0.00

**\*110\***

Pick Kit

Packaging

Memo

0.00

Packaging

120

0.00

**\*120\***

QC4- 100% Inspect kits for completeness

QC

Memo

0.00

Quality Control

Pto →

FORMS 12-1-17 (2)

12/1/17

(72)

# Dart Aerospace Ltd

W/O: 78544		Perm. Chng.							WORK ORDER CHANGES	
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
12/01/17	#100	Fix amount under qty per kit for All Parts. ADD copy of BOM for Ref.				S 12/01/17 AS7012	S 12/01/17			
		Intuitive problem see attach. 12.01.17								

Part No: D412-666-011 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 78544

**\*78544\***

Page 2

January-11-12 10:53:05 AM

Item ID: D412-666-011

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Gross Weight Towing

Start Date: 11/01/2012 Start Qty: 4.00 **\*4\***

Cust Item ID:

Required Date: 25/01/2012 Req'd Qty: 4.00 **\*4\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
<b>*130*</b>	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D412-666-011 Location: <u>12/1/12</u> PPP Rev: <u>2</u>								
140	QC21- Final Inspection - Work Order Release	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									

12/1/12 50 (2)

12/1/12 17 (2)

12/20/17 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-11-12 10:53:11 AM

Work Order ID: 78544

Parent Item: D412-666-011

Parent Item Name: Gross Weigh

# Picklist Print

January-11-12 10:53:11 AM

Work Order ID: 78544

Parent Item: D412-666-011

Parent Item Name: Gross Weight Towing

\*78544\*

\*D412-666-011\*

Start Date: 11/01/2012

Required Date: 25/01/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:B Added GHG 002 NG 02-03-06  
IPP Rev:C As per Rev C JLM 07-09-07 Verified By:EC

MS21042L6

\*MS21042L6\*

Nut

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN6-15A		Purchased	No				Each	21.0000		16			
---------	--	-----------	----	--	--	--	------	---------	--	----	--	--	--

\*AN6-15A\*

Bolt

Location

ST341

117795

Loc Qty

21

21

Loc Code

Each

6.0000

AN6-45A

Purchased

No

\*AN6-45A\*

Bolt

Location

ST343

118112

Loc Qty

6

6

Loc Code

Each

0.0000

AN960JD616

NAS1149D0663J

Purchased

No

\*AN960JD616\*

Washer

D2888

Manufactured

No

\*D2888\*

Lug

Location

ST480

72952

Loc Qty

4

4

Loc Code

January-11-12 10:53:11 AM

Page 1

Dart Aerospace Ltd

W/O:		
DATE	STEP	

Part No: \_\_\_\_\_

Resolution

NCR:		
DATE	STEP	

NOTE: Date & initial all entries

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D205-634 REV. B OR LATER APPROVED REVISION  
 REF. TCCA STC: SH96-88  
 REF. FAA STC: SR00563NY  
 REF. EASA.IM.R.S.01303  
 REF. JAPANESE STC: STC-55-1-TYO

**REFERENCE ONLY**

THE FOLLOWING OPTIONAL KITS MAY BE PURCHASED FROM DART AEROSPACE AND ARE APPROVED FOR INSTALLATION ON DART D205-634-XXX SKIDTUBES



KIT	DESCRIPTION	INSTALLATION INSTRUCTIONS	PURPOSE
D205-665-011	CABLE GUARD KIT	D205-665 REV. F OR LATER APPROVED REVISION	TO PROTECT THE SKIDTUBES FROM DAMAGE FROM HOIST KIT CABLES
D205-665-013	CABLE GUARD KIT	D205-665 REV. F OR LATER APPROVED REVISION	TO PROTECT THE SKIDTUBES FROM DAMAGE FROM HOIST KIT CABLES
D205-665-015	CABLE GUARD KIT	D205-665 REV. F OR LATER APPROVED REVISION	TO PROTECT THE SKIDTUBES FROM DAMAGE FROM HOIST KIT CABLES
D205-665-017	CABLE GUARD KIT	D205-665 REV. F OR LATER APPROVED REVISION	TO PROTECT THE SKIDTUBES FROM DAMAGE FROM HOIST KIT CABLES
D205-665-019	CABLE GUARD KIT	D205-665 REV. F OR LATER APPROVED REVISION	TO PROTECT THE SKIDTUBES FROM DAMAGE FROM HOIST KIT CABLES
D412-666-011	GROSS WEIGHT TOWING KIT	D412-666 REV. C OR LATER APPROVED REVISION	TO ALLOW FOR GROSS WEIGHT TOWING OF THE AIRCRAFT IN ACCORDANCE WITH BHT-412-SI-58
D412-673-011	ELECTRIC STEP ADAPTATION KIT	D412-673 REV. C OR LATER APPROVED REVISION	TO ALLOW INSTALLATION OF BELL 212-706-105-003 ELECTRIC RETRACTING STEPS

CANADA  
 DEPARTMENT OF TRANSPORT  
 AIRCRAFT CERTIFICATION  
 BRANCH  
 DAO # 01-Q-01

**APPROVED**

BY:   
 D. SHEPHERD (DE # 02)

DATE: 11.10.31  
 CERT. NO.: SH96-88  
 ISSUE NO.: 3

E	ADD D205-665-019	RF	11.10.31
D	ADD D205-665-011/-013	CP	09.11.12
C	ADD D205-665-017; REFORMAT	HS	09.09.08
B	ADD D412-673-011	CP	99.10.01
A	NEW ISSUE	CP	99.04.08
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO. REV. E	
MFG. APPR.	N/A	DSI 9152 SHEET 1 OF 1	
APPROVED		TITLE SCALE	
DE APPR.		OPTIONAL SKIDTUBE KITS NTS	
DATE	11.10.31	<small>COPYRIGHT © 1999 BY DART AEROSPACE LTD.                  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

# 1.0 APPLICABILITY:

GROSS WEIGHT TOWING KIT D412-666-011 MAY BE INSTALLED ON DART D205-634-XXX OR D204-635-XXX OR D412-742-XXX SKIDTUBES INSTALLED ON 412 AIRCRAFT TO ALLOW GROUND HANDLING AT GROSS WEIGHT IN ACCORDANCE WITH BELL SERVICE INSTRUCTION BHT-412-SI-58. IT IS ALSO ACCEPTABLE TO INSTALL THIS KIT ON 204/205/210/212 AIRCRAFT EQUIPPED WITH DART SKIDTUBES IN ORDER TO PRESERVE THE LIFE OF THE AFT CROSSTUBES. THIS KIT CONTAINS ENOUGH PARTS TO INSTALL D2888 LUGS ON BOTH SKIDTUBES.

# 2.0 PARTS LIST:

QTY -011	PART	DESCRIPTION
X	D412-666-011	GROSS WEIGHT TOWING KIT
2	D2888	LUG
4	AN6-15A	BOLT
4	AN6-45A	BOLT
8	AN960JD616	WASHER
4	MS21042L6	NUT (or MS21042-6)

REFERENCE ONLY

# 3.0 WEIGHT AND BALANCE:

INSTALLATION	WEIGHT	LONGITUDINAL	
		ARM	MOMENT
D412-666-011	1.90 lb 0.86 kg	163.0 in 4.14 m	310 in lb 3.56 m kg

# 4.0 PROCEDURE:

- 1) REMOVE AN6-12A BOLTS (4) ON INBOARD SIDE OF AFT SADDLE AND DISCARD. ON LANDING GEAR WITH DART AFT CROSSTUBES, REMOVE (4) AN6-40A BOLTS.
- 2) INSTALL D2888 LUGS WITH AN6-15A BOLTS (2) AS SHOWN IN FIGURE 1. USE AN6-45A (2) BOLTS ON DART CROSSTUBES, AS SHOWN IN FIGURE 2.
- 3) TORQUE BOLTS TO 95-110 in-lb (10.7-12.4 N-m).

# 5.0 NOTE:

IT IS ACCEPTABLE TO REPLACE THE AN6-15A/45A BOLTS WITH LONGER OR SHORTER AN6 BOLTS AS REQUIRED AND/OR INSTALL EXTRA AN960JD616 WASHERS UNDER NUT TO ENSURE 1.5 TO 4 THREADS IN SAFETY.

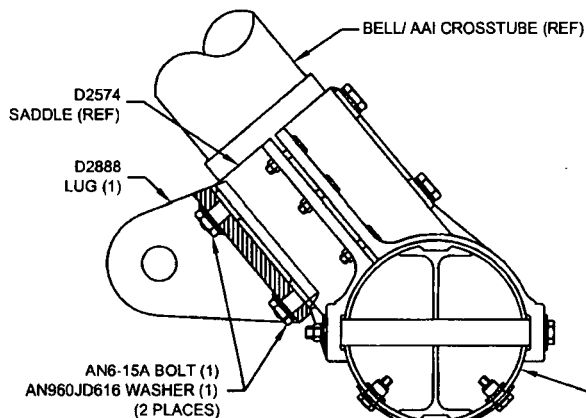


FIGURE 1  
(BELL/AAI CROSSTUBES)

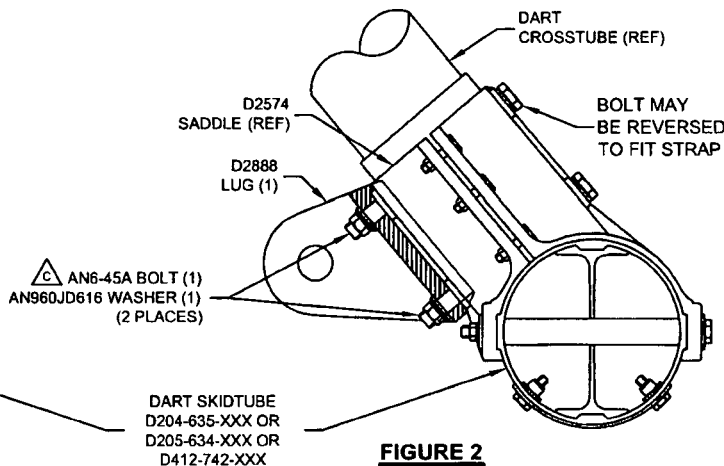


FIGURE 2  
(DART CROSSTUBES)

C	- AN6-45A WAS AN6-43A, ADD NOTES - TO ENSURE COMPATIBILITY WITH D412-742-011/-013 - ESTIMATE (PARTS/PICK LIST) IS AFFECTED	MB	07.08.09
B	UPDATE KIT FOR BOTH SKIDTUBES AND COMPATIBILITY WITH DART CROSSTUBES	CP	02.03.04
A	NEW ISSUE	CP	99.05.03
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. C
MFG. APPR.	N/A	D412-666	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		412 GROSS WEIGHT TOWING KIT	1:4
DATE	07.08.10	COPYRIGHT © 1999 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Item ID: D412-666-011

500M Turn Production

Status	Item ID	Rev	Name	Start Date	Quantity	Pe	UOM	Scrap %	Route Seq	II	Sort	Comments	Date Last Mod	Stop Date
	AN6-15A		Bolt	6/24/2009	4.0000		Each	0 %			0		12/5/2009 7:...	
	AN6-45A		Bolt	6/24/2009	4.0000		Each	0 %			0		12/5/2009 7:...	
	AN960JD616		Washer	6/24/2009	8.0000		Each	0 %			0		12/5/2009 7:...	
	D2888		Lug	12/5/2009	2.0000		Each	0 %			0		12/5/2009 8:...	
	MS21042L6		Nut	6/24/2009	4.0000		Each	0 %			0		12/5/2009 7:...	